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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/691,962	10/18/2000	Bore Klemets	AN05975/3151P1US	3234

7590 02/10/2006
Lainie E Parker
Akzo Nobel Inc
Intellectual Property Department
7 Livingstone Avenue
Dobbs Ferry, NY 10522-3408

EXAMINER

FORTUNA, JOSE A

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 02/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/691,962	Applicant(s) KLEMETS ET AL.	
	Examiner José A. Fortuna	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-13, 15, 21-27, 29-31, and 49-57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-13, 15, 21-27, 29-31 and 49-57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>1/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-4, 6-13, 15, 21-27, 29-31, and 49-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnsson in "Advanced water recycling system required for new South African mill," or Panchapakesan in "Closure of mill whitewater systems reduces water use,

Art Unit: 1731

conserves energy,” or Guss in "Closed Water Systems in Mills Using Secondary Fiber," or Hoffman, US Patent No. 6,071,380 in view of Nagarajan et al., EP 0 805 234 further evidenced by Satterfield et al. or Blanco et al. in “Predicting the impact of closing the water system in paper mills” (cited in IDS filed on August 22, 2005)

Johnsson, Panchapakesan, Gus, Hoffman and Blanco et al. teach a process of making paper using closed systems, i.e., water and other raw materials are recycled back to the system. In those systems the amount of fresh water is minimized. Even though none of the above cited references explicitly disclose the conductivity and the amount of multivalent cations in the pulp, Satterfield et al., which has been previously discussed, teaches that in closed systems, the conductivity and amounts of multivalent cations are within the claimed range, evidence is shown by Satterfield et al. in column 4, lines 41-67, and Blanco et al., Table I on page 436, where they teach that the conductivity of the recycled water is usually above 3,000 micro Siemens, usually 3-11 mS/cm see Table I of Blanco et al..

None of the above reference teaches the cationic organic polymer as claimed. However, Nagarajan et al. teach a process of improving retention in process of making paper, in which a cationic organic polymer containing an aromatic group, same as the one claimed, is added to a papermaking pulp along with an anionic inorganic particle(s), such as bentonite or silica sol, see abstract. The monomers conforming the cationic additives, shown by the reference, are the same as claimed, see abstract and pages 4-5. Therefore, using the polymers as taught by Nagarajan et al. in the systems taught by the primary references, Johnsson, Panchapakesan, Gus and Hoffman, would have been obvious to one of ordinary skill in the art in order to improve retention. Note that one of ordinary skill in the art would have reasonable expectation of success if the polymers

Art Unit: 1731

taught by Nagarajan et al. were used for the same purpose, i.e., for improving fiber retention in the system.

5. Claims 1-4, 6-13, 15, 21-27, 29-31, and 49-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnsson, Panchapakesan, Gus and Hoffman, cited above in view of Pearson, US Patent No. 5,466,338 further evidenced by Satterfield et al. and Blanco et al.

Johnsson, Panchapakesan, Gus and Hoffman teach a process of making paper using closed systems, i.e., water and other raw materials are recycled back to the system. In those systems the amount of fresh water is minimized. Even though none of the above cited references explicitly disclose the conductivity and the amount of multivalent cations in the pulp, Satterfield et al., which has been previously discussed, teaches that in closed systems, the conductivity and amounts of multivalent cations are within the claimed range, evidence is shown by Satterfield et al. in column 4, lines 41-67, and Blanco et al., Table I on page 436, where they teach that the conductivity of the recycled water is usually above 3,000 micro Siemens, usually 3-11 mS/cm see Table I of Blanco et al. None of the above reference teaches also the cationic organic polymer as claimed. However, Pearson teaches the use of dispersion of polymers for coated broke treatment. The polymers disclosed by Pearson are the same ones used in the present invention. Therefore, using the polymers as taught by Pearson in the systems taught by the primary references, Johnsson, Panchapakesan, Gus and Hoffman, would have been obvious to one of ordinary skill in the art in order to improve the reduction of the pitch, which as it is well known it is one of the problems in the closed systems, see above references. Note that one of ordinary skill in the art would have reasonable expectation of success if the polymers taught by Pearson were used for the same purpose, i.e., for improving the reduction white pitch. The

Art Unit: 1731

polymers disclosed by Pearson are the same ones used in the present invention and therefore, it would be expected the same increase of the strength of the web, since the addition amounts are within the ranges disclosed in the specification of the claimed invention, see abstract and column 4, line 59 through column 5, line 25.


Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure in the art of "Process of Producing Papers."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to José A. Fortuna whose telephone number is 571-272-1188. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


José A Fortuna
Primary Examiner
Art Unit 1731

JAF